

Git Actions

Temeljni koncepti, konfiguracija delovnih tokov



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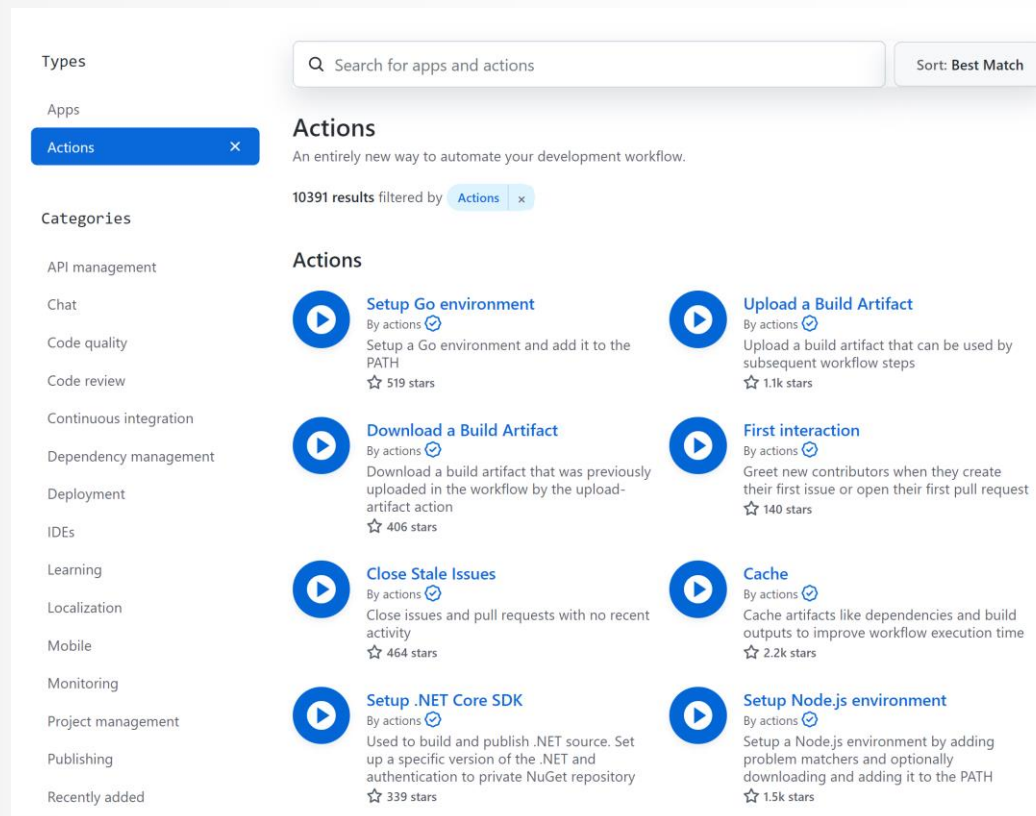
- Omogoča definicijo ciklov delovnih tokov za razvoj programske opreme v repozitoriju na GitHub-u
- Delovni tokovi sestojijo iz t.i. akcij, ki se izvedejo samodejno ob določenih dogodkih
- Podpira CI / CD

Temeljni koncepti

- **Akcije (Actions):** osnovni gradniki delovnega toka, ki jih lahko kombiniramo za izvedbo opravila
- **Dogodki (Events):** specifične aktivnosti, ki sprožijo delovni tok, med drugim uporaba push ali pull
- **Opravila (Jobs):** množica nalog za izvedbo
- **Izvajalno okolje (Runner):** izvajanje opravil
- **Delovni tok (Workflow):** avtomatiziran proces, sestavljen iz več opravil. Definiran je datoteki `.yaml` v direktoriju `.github/workflows`

Konfiguracija delovnih tokov

- Uporaba predlog, ki so na voljo na GitHub Marketplace
- Kreiranje datoteke, ki opisuje delovni tok: dodajanje datoteke `.yml` v direktorij `.github/workflows`



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Actions

An entirely new way to automate your development workflow.

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Actions

- Setup Go environment**
By actions
Setup a Go environment and add it to the PATH
☆ 519 stars
- Upload a Build Artifact**
By actions
Upload a build artifact that can be used by subsequent workflow steps
☆ 1.1k stars
- Download a Build Artifact**
By actions
Download a build artifact that was previously uploaded in the workflow by the upload-artifact action
☆ 406 stars
- First interaction**
By actions
Greet new contributors when they create their first issue or open their first pull request
☆ 140 stars
- Close Stale Issues**
By actions
Close issues and pull requests with no recent activity
☆ 464 stars
- Cache**
By actions
Cache artifacts like dependencies and build outputs to improve workflow execution time
☆ 2.2k stars
- Setup .NET Core SDK**
By actions
Used to build and publish .NET source. Set up a specific version of the .NET and authentication to private NuGet repository
☆ 339 stars
- Setup Node.js environment**
By actions
Setup a Node.js environment by adding problem matchers and optionally downloading and adding it to the PATH
☆ 1.5k stars

Pomembni koncepti v datoteki, ki opisuje delovni tok

- Name: ime delovnega toka, ki je prikazano na strani GitHub Actions

```
name: Continuous Deployment
```

- On: definira dogodke, ki prožijo delovni tok

```
on: push
# or
on: [pull_request, issues]
```

- Jobs: definicija opravil

```
jobs:
  my-job:
    name: My Job
    runs-on: ubuntu-latest
    steps:
      - name: Print a greeting
        run: |
          echo Hello there!
```

■ Env: izbira okolja

- Runs-on: definicija OS. Možno je definirati tudi več OS.

```
runs-on: ${ matrix.os }  
strategy:  
  matrix:  
    os: [ubuntu-20.04, ubuntu-18.04]  
    node: [6, 8, 10]
```

Primer

```
1  name: build with Maven and package as Docker image
2
3  on:
4  push:
5    branches: [ master ]
6  pull_request:
7    branches: [ master ]
8
9  jobs:
10 build:
11
12    runs-on: ubuntu-latest
13
14    steps:
15      - uses: actions/checkout@v2
16
17      - name: Get Time
18        id: time
19        uses: nanzm/get-time-action@v1.0
20        with:
21          timeZone: 1
22          format: 'YYYY-MM-DD-HH-mm-ss'
23
24      - name: Set up QEMU
25        uses: docker/setup-qemu-action@v1
26      - name: Set up Docker Buildx
27        uses: docker/setup-buildx-action@v1
28      - name: Login to DockerHub
29        uses: docker/login-action@v1
30        with:
31          username: ${ secrets.DOCKERHUB_USERNAME }
32          password: ${ secrets.DOCKERHUB_TOKEN }
33      - name: Build and push
34        id: docker_build
35        uses: docker/build-push-action@v2
36        with:
37          file: ./Dockerfile_with_maven_build
38          push: true
39          tags: prporso/image-catalog:${ steps.time.outputs.time }
40
```

- Več informacij: [GitHub Actions Documentation - GitHub Docs](#)